DOCUMENT RESUME

ED 306 620 CS 506 637

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TITLE Bridging the Technology of Telecommunications into Business Communication.
PUB DATE Feb 88
NOTE 6p.; Paper presented at the Annual Southeast Regional Conference of the Association for Business Communication (Tampa, FL, February 25-27, 1988).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Business Communication; Communication Research; Electronic Mail; Facsimile Transmission; Modems; *Occupational Surveys
IDENTIFIERS Federal Express Mail

ABSTRACT

A survey of companies using telecommunications equipment investigated the distribution of channel selection and the use of external mail distribution systems. A total of 50 companies responded to the survey, which identified 12 telecommunications systems and seven external mail distribution systems. Results indicated that the four most popular telecommunication systems (listed in decreasing order) were data modems, key telephone systems, facsimile, and computer-to-computer data transmission. Results also indicated that facsimile, Federal Express, and telex were the most popular external mail distribution systems. (Two tables of data are included.) (RS)

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BRINGING THE TECHNOLOGY OF TELECOMMUNICATIONS INTO BUSINESS COMMUNICATION

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ABSTRACT

Because of rapid technology changes, studies of companies should be undertaken periodically to learn types of decisions being made about equipment used in the telecommunication area. Data presented in this study is based on research of current literature and questionnaire and interview responses of 50 companies.

INTRODUCTION

The rising costs of communication and office operations and the need for increased communication justifies telecommunication system installation in an ever increasing number of businesses. Therefore, business communication instructors should incorporate up-to-date telecommunication materials in the curriculum.

"Telecommunication is the transmission of information between one information processing system and another." That information may include data, image, text, and voice. (5)

Our 1987 study reflects channels determined by a survey of local businesses. This paper will be organized in the following order: need for the study; communication personnel; channel selection; and summary of results.

NEED FOR THE STUDY

When one looks at any of the models of communication whether the Shannon-Weaver Model whose elements include source, message, channel, receiver, and destination; the Berlo Model whose elements include the source, message, channel, receiver; or the Laswell Model whose elements include Who Says What to Whom Through What Channel with What Effect, one integral part of each model is the channel selection.

The criteria the sender or source must consider when deciding upon the channel are (1) cost, (2) time, (3) message intensity or importance, (4) receiver such as who or the number, and (5) need for a written record. In recent years

the media from which to select was somewhat limited. When one needed to send an oral message, the choice was between face-to-face communication or telephone. When one needed to send a written message. the possible choice was among a letter, memo, facsimile, or in-house publications. Even though each of these channels is still available, many others are available such as the electronic telephone, video conferencing, mailgram, computer-to-computer, terminal-to-computer, terminal-to-terminal, satellite communications, and other local or global area network configurations. As channels have increased, costs have increased and communication decisions are becoming more complex.

Telecommunication can be a major factor in more economical, efficient communication processes. The telecommunication industry is changing constantly. With technological advances and deregulation and the divestiture of AT&T, companies are finding it difficult to keep up with technology. Choosing telecommunication components that best serve an organization's needs is very important and difficult as well. However, consultant groups can help an organization determine their telecommunication needs and assist in certain tasks. Also, the Telecommunication Association will provide guidance and education to managers assigned the task of company telecommunication. For more information about the support services, write TCA, 1515 West Cameron Avenue B 140, West Covina, CA 91790.

REASONS FOR ADOPTING TELECOMMUNICATION

Each company should look at telecommunication systems in the office because: (1) as much as 75 percent of document delivery time savings, (2) increased security and accuracy in transmission, (3) when comparing a multipage document, the cost of immediate delivery is much less than with other carriers. (1)

COMMUNICATION PERSONNEL

Organizations need someone to manage the telecommunication function. "Prior to the advent of competition, 'telecommunication management' meant simply checking the monthly phone bill, handling complaints about the phone system when it was not working properly, and ordering equipment and service changes." (2) When assistance was needed, organizations called the local telephone company. Now, because several factors have changed our environment over the past few years, telecommunication managers have found themselves responsible for the company telephone system and networks for the first time. Besides the industry changes, many corporations are awakening to the greater role of telecommunication in corporate strategy and in increasing worker productivity. As a result, they must balance technical and mangerial skills more effectively than before.

Managers responsible for their company's telecommunication system are now involved with functions essential to a manager's role, such as planning, designing, selecting, or upgrading systems under their charge. They must: learn new technologies, plan telecommunication services, and select new systems from a diversity of vendors. (3)

Telecommunications are regarded as company resources and, when managed effectively, can make an important contribution to the organization's profitability.

Because divestiture, deregulation, and multivendor environments are prevalent in today's telecommunication industry, the new telecom manager must:

* develop telecom staffs by hiring, training, motivating, and retaining talented people. The telecommunication industry is experiencing a severe shortage of skilled technicians to service telecommunication equipment.

* educate one's self. In the telecom environment, many opportunities are available to increase productivity and save money.

* get the most from vendor products and services.

* formalize strategic plans for five to ten years ahead.

CHANNEL SELECTION

Organizations that have acquired a phone system in the past should be aware of certain features. If a system is four to five years old, a company is not taking advantage of the productivity features found in today's business phones. Many phone systems have features that allow businesses to control and manage two very costly corporate expenses—long distance charges and personal phone calls. Other features such as on-hook dialing and speed dialing save time and allows workers to be more productive. (4)

Technological change has affected all facets of the telecommunication industry. After choosing a phone system, even a greater problem exists in choosing a long-distance carrier. Also, with increased competition among long-distance carriers, companies have found it difficult to distinguish between features that are best suited for their needs. The decision in choosing a telephone system is a major decision and must be approached with a clear understanding of one's telephone needs.

RESULTS OF THE SURVEY

As shown in Table 1, of the 12 types of systems, the following types of systems were used most frequently: data modems, 78 percent; key telephone systems, 65 percent; facsimile and computer-to-computer data transfer, both 61 percent; and private branch exchange, 49 percent.

TABLE 1
SYSTEMS USED IN THE BUSINESS

Type of System	Number	Percentage of Response
Key telephone systems	15	65
Private branch exchange	11	49
Large telephone switching	10	43
Teletype	6	26
Facsimile	14	61
Cellular telephone	9	39
Data modems	18	78
Video conferencing	4	17
Telex	10	43
Electronic telephone	8	35
Computer-to-computer data	14	61
E-com	4	17

NOTE: The possibility existed that each person could have responded affirmatively to each item; therefore, percentages could have been 100 percent for each item.

In summary, telecommunication components included telephone systems, teletype, facsimile, video teleconferencing, telex, and computer-to-computer data transfer.

Sixty-five percent of the firms used "dial-up" equipment. Information gained from the interviews indicated most of the telecommunication was "dial-up" equipment and approximately 20 percent was by "hard-wired" form of computer communication. Also video telecommunication was used by some firms for training purposes.

As shown in Table 2, Facsimile, Federal Express, and Telex were external mail distribution systems used most frequently.

TABLE 2
EXTERNAL MAIL DISTRIBUTION SYSTEMS

Type of System	Number	Percentage of Response
Facsimile	15	65
Federal Express	15	65
Intepost	0	0
E-com	3	13
TWX	4	17
Mailgrams	5	22
Telex	11	48

NOTE: The possibility existed that each person could have responded affirmatively to more than one item; therefore, percentages could have been 100 percent for each item.

In addition to the external mail distribution systems just given, nine percent of the firms used electronic internal mail distribution systems.

Seventy percent of the firms owned their telecommunication system while thirty percent leased their phone system. Seventy percent of the firms used AT&T for their long-distance carrier.

Growth and productivity in the firm was attributed to the telecommunication system by half of the firms surveyed.

For training purposes, seventy percent of the firms did have a telecommunication manual, while thirty percent did not.

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